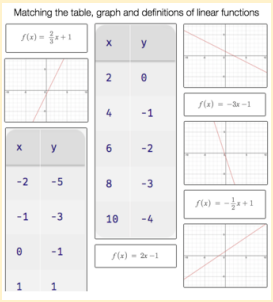
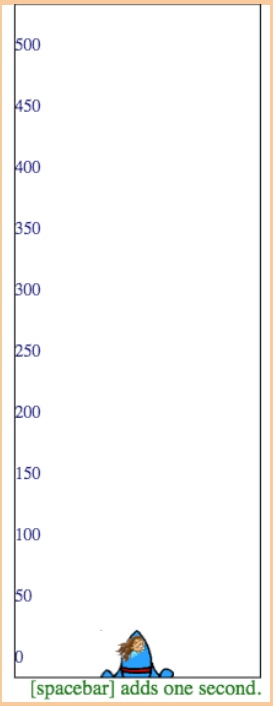
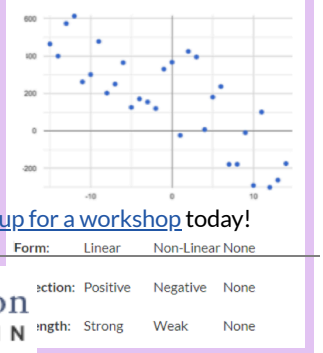
Materials for Teachers using IM Grade 8 Math™

Like IM 6–8 Math™, Bootstrap is field-tested and research-validated, with a focus on deep exploration that supports and engages all kinds of learners. Our integrated computing modules have been proven to support math transfer and can be mixed and matched to supplement what you're already doing in your classroom. *Teaching 8th grade math with Bootstrap also addresses many CS Standards, including: 1B-AP-10, 2-AP-1, 2-AP-10, 2-AP-11, 2-AP-12, 2-AP-13, 2-AP-14, 2-AP-17, 2-AP-19, 3B-AP-14, and 3B-AP-21.*

IM Unit	Integrated Computing Lessons that can extend the IM Unit
Rigid Transfromations and Congruence	Function Composition • Simple code allows students to experiment with rotating, scaling, and reflecting images of shapes, text or anything from the web. • Practicing transformations with their own names is highly motivating. • In seconds, students can adjust the degree of rotation and get visual feedback on how the numbers transform the images.
Linear Relationships	Functions Can Be Linear • We offer an abundance of interactive materials to get students thinking about whether relationships represented in tables and graphs are linear. • No programming required. Defining Linear Functions • Check out our interactive materials that invite students to investigate linear relationships in tables, graphs, and function definitions. 
Functions and Volume	Solving Word Problems with the Design Recipe • Students solve a classic function word problem about the velocity and height of a rocket - and then write simple code to see the rocket blast off. • Students can even modify the code to change the speed and direction of the rocket! Piecewise Functions and Conditionals • Students learn how to define a function so that it behaves differently depending on the input, beginning with a program that generates a variety of different red shapes. • Video games rely on piecewise functions for player animation! The video game project offers an exciting opportunity to apply new and otherwise abstract mathematical knowledge. 
Associations in Data	Scatter Plots • Simple code allows students to quickly generate scatterplots from any dataset, allowing for lively discussion about trends observed. Correlations • As a class, your students will search out correlations in a dataset, discussing and analyzing the form, direction, and strength of the linear relationships they see in the scatterplots they generate. • Students repeat this process in a dataset of their choice, one that sparks their interest. Simple code enables s in their dataset. • Our data science curriculum le them to inspire real data analysis and original research. Individual lessons are impactful regardless of whether you opt to facilitate the culminating research project or not. 

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